

State of California
Business, Transportation & Housing Agency
Department of Transportation

POLICY MATTERS
Seismic Safety Retrofit Program
Action Item

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CTC Meeting: February 28, 2002

Reference No.: 4.2

Original Signed by _____
ROBERT L. GARCIA
Chief Financial Officer
February 1, 2002

ANNUAL REPORT ON
SEISMIC SAFETY RETROFIT PROGRAM

In accordance with Government Code Section 8879.17 and Streets and Highways Code Section 180.10, I am writing to report on the progress of our program for the seismic safety retrofit of publicly owned highway bridges through the end of 2001. The Seismic Retrofit Bond Act of 1996 (Proposition 192), which was approved by the voters at the March 26, 1996, direct primary election, requires the California Department of Transportation (Department) to report annually the status of funds available for seismic retrofit projects and the expenditures of bond proceeds.

The Department's seismic safety retrofit program consists of four areas including Phase 1, Phase 2, Toll Bridges, and Local Program. Proposition 192 provides funding for Phase 2 and Toll Bridge projects. Phase 1 and Local Program improvements are funded from other funding programs. These programs are included here to provide a comprehensive view of the entire seismic safety bridge retrofit program at the Department.

Phase 1 Seismic Retrofit Program:

- Phase 1 seismic retrofit projects consist of a total of 1,039 bridges. All 1,039 bridges have had seismic safety retrofit work completed. The Phase 1 seismic retrofit work was completed in May 2000. There are a few follow-up landscape mitigation contracts remaining to be completed.
- Phase 1 consists of bridges that were determined to be the most critical bridges for seismic retrofit based on the Department's screening process. The total estimated cost for Phase 1 is \$1.08 billion. Phase 1 projects have been funded from State Highway funds from the State Highway Operation and Protection Program (SHOPP). The total expenditures to date are approximately \$1.07 billion. The remaining balance of \$10 million should be sufficient to complete the few remaining landscape mitigation contracts in the Phase 1 program.

Phase 2 Seismic Retrofit Program:

- Phase 2 consists of bridges that were determined to need seismic retrofit based on additional screening in the Department's screening process. The total budget for Phase 2 is \$1.35 billion. The funds include \$1.21 billion in Proposition 192 funds and \$0.14 billion in State Highway funds (expenditures prior to passage of Proposition 192). A total of \$1.068 billion has been allocated and awarded for capital outlay and support expenditure costs.
- Phase 2 seismic retrofit projects consist of a total of 1,155 bridges. A total of 1,135 bridges (representing 98.3 percent) have had seismic safety retrofit work completed. Phase 2 has 18 bridges remaining in design and two bridges under construction. The remaining bridges will be completed at various times over the next few years. There are three major bridges that will replace existing bridges while accommodating existing traffic. These bridges will not be completed until after 2005, depending on the final traffic handling conditions.

	<u>Contract Awarded</u>	<u>Retrofit Completed</u>	<u>Total Capital Planned</u>	<u>Percent Awarded *</u>	<u>Total Planned**</u>
Program Dollars (Dollars in Millions)	\$ 720	\$ 630	\$ 1,000	72%	\$ 1,350

* measure of retrofit contracts, excluding mitigation contracts

** Includes support cost

	<u>Contract Awarded</u>	<u>Retrofit Completed</u>	<u>Total Planned</u>	<u>Percent Completed</u>
Number of Bridges	1138	1135	1155	98.3%

Local Seismic Retrofit Program:

- The Streets and Highways Code identifies the Department, Los Angeles County, and Santa Clara County as lead agencies for the local seismic retrofit program. Lead agencies are responsible for assessing the need for seismic retrofit work on non-State, publicly owned bridges and identifying required retrofit work. Each bridge owner is responsible for securing environmental approvals, right-of-way clearances, and administering construction contracts. A combination of Federal and State funding is used to fund these projects through the Department's Local Assistance programs.
- The Department as lead agency: (73 percent of local program) Out of a total of 895 bridges, 281 are being evaluated, 209 are in design, 106 are under construction, 188 are complete and 111 do not require retrofit.
- Los Angeles as lead agency: (24 percent of Local Program) Out of a total of 292 bridges, 25 are being evaluated, 73 are in design, 13 are under construction, 128 are complete and 53 do not require retrofit.

Local Seismic Retrofit Program (Continued):

- Santa Clara as lead agency: (3 percent of Local Program) Out of a total of 36 bridges, two are being evaluated, none are in design, none are under construction, 25 are complete and 9 do not require retrofit.
- Total Local Agency Program: Out of a total of 1,223 bridges, 308 (25 percent) are being evaluated, 282 (23 percent) are in design, 119 (10 percent) are under construction, 341 are complete and 173 do not require retrofit.

Toll Bridge Seismic Retrofit Program:

There are nine State-owned toll bridges. Seven of the nine toll bridges require seismic retrofit.

Program Funding

Assembly Bill (AB) 1171 (Chapter 907, Statutes of 2001 – Dutra) establishes funding in the amount of \$4.637 billion to retrofit the State's toll bridges. The funding includes the \$2.620 billion previously provided by statute and \$2.017 billion from new sources. The new funds are composed of revenue from an extended toll surcharge (Surcharge), and Federal Highway Bridge Rehabilitation and Replacement (HBRR) funds. The legislation permits use of the Surcharge for financing purposes and provides for all financing costs. The table below summarizes the AB 1171 funding.

Toll Bridge Seismic Retrofit Program Funding AB 1171 (Dollars in millions)	
Fund Source	
Proposition 192	\$790
Regional Share	
Bay Area Surcharge Revenues	\$2,282
San Diego Coronado Toll Bridge Revenue Fund	\$33
Vincent Thomas Bridge Contribution	\$15
State's Share	
State Highway Account (SHA)	\$795
Public Transportation Account (PTA)	\$80
Federal Highway Bridge Replacement and Rehabilitation (HBRR)	\$642
Total	\$4,637

The legislation provides authority for bond financing as well as utilization of appropriate Federal funds raised through a direct loan or a line of credit. Pursuant to the provisions of AB 1171, the Department submitted a loan application to the Federal Highway Administration (FHWA), Transportation Infrastructure Finance Innovative Act of 1998 (TIFIA), Joint Program Office (JPO). The finance plan presented in the TIFIA application includes the use of \$642 million of HBRR funds, \$925 million from issuance of revenue bonds and up to \$450 million through TIFIA. The United States Secretary of Transportation announced the loan approval on December 4, 2001.

Revenue and Expenditures

The program's financial status is summarized in the table below. The figures include the surcharge revenues collected, transfers from the State Highway Account (SHA) and Public Transportation Account (PTA), and expenditures from the Toll Bridge Seismic Retrofit Account (TBSRA) and Proposition 192. To date, the \$790 million provided by the Seismic Retrofit Bond Act of 1996 (Proposition 192) has been fully allocated by the California Transportation Commission.

Toll Bridge Seismic Retrofit Program Financial Status (Dollars in millions)	
Revenues:	
◆ Toll Surcharge	\$456.6
◆ SMIF Interest	40.9
◆ Bond Revenue	790.0
◆ SANDAG	33.0
Transfers to TBSRA:	
◆ State Highway Account	354.6
◆ Public Transportation Account	10.0
Total Revenues and Transfers	\$1,685.1
Expenditures:	
◆ Capital Outlay*	\$1,367.1
◆ State Operation	454.0
Total Program Expenditures	\$1,821.1

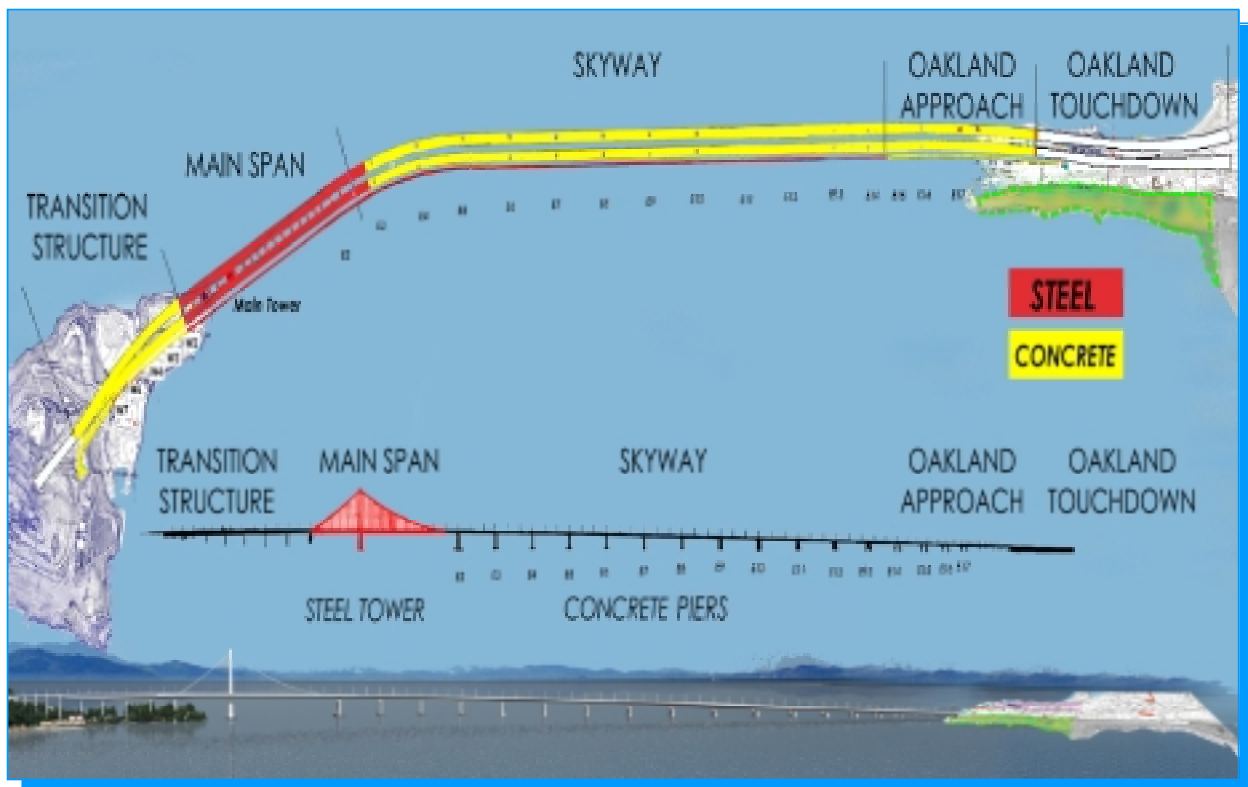
*Total includes project encumbrances, to date, of \$662.4 million.

San Francisco Oakland Bay Bridge (SFOBB) East Span Replacement

The existing east span of the SFOBB will be replaced by a new bridge across the central San Francisco Bay between Yerba Buena Island (YBI) and a spit of land referred to as the Oakland Touchdown area. The new bridge will be built on an alignment to the north of the existing bridge. It will provide five mixed-flow traffic lanes for each direction of travel. On the south side of the eastbound deck, a bicycle/pedestrian path will be constructed above the roadway and be separated from traffic by the roadway shoulder, a concrete barrier, and a railing. The bicycle/pedestrian path will extend from the Oakland Touchdown area to the western terminus of the bridge at YBI.

The final EIS for the project was completed in September 2001 and the Record of Decision (ROD), the legal decision document which selects the alternative to be built and which is the final legal decision pursuant to National Environmental Policy Act (NEPA), was issued in October 2001.

The new east span will be constructed in three phases: 1) Self-Anchored Suspension Span and Yerba Buena Island transition; 2) Skyway; and 3) Oakland Touchdown. Please refer to figure below. A demolition contract will be utilized to remove the existing bridge, following construction and the transfer of traffic onto the new east span.



The first contract will prepare the embankment for the westbound roadway at the Oakland Touchdown (where the Oakland approach reaches land). Bids were opened for this contract on December 12, 2001, and the low bid was \$1.14 million below the Engineer's Estimate. Construction will begin in January 2002. The new westbound roadway is located just north of the current alignment, so part of this work includes placing fill in San Francisco Bay.

The second contract will construct what is referred to as the "Skyway" bridge. Bids were opened on the Skyway contract on December 19, 2001, and the low bid totaled \$1.04 billion. This amount was \$250 million over the Engineer's Estimate, but the project contingencies are sufficient to cover this increase. The Department will pursue cost saving measures aggressively to stay within the \$2.6 billion east span project budget. Construction is expected to begin in early 2002.

The current cost estimate for the new east span is \$2.60 billion. This cost estimate for the Metropolitan Transportation Commission (MTC) selected design of the new east span includes all costs incurred to date (e.g. the interim retrofit and numerous additional studies). The estimate includes: escalation, cost of engineering, environmental document, numerous extra studies, design costs, right-of-way, utilities, environmental mitigation, interim retrofit, cost of original retrofit design (sunk costs), actual and anticipated construction bids, and appropriate contingencies to address potential construction issues considered to date.

SEISMIC RETROFIT OF TOLL FACILITIES

	<u>Number of Projects</u>	<u>Current Status</u>	<u>Begin Construction</u>	<u>Retrofit Complete</u>	<u>Total Cost (In Millions)</u>
<u>SFOBB</u>					
SF-Oakland Bay (SFOBB):					
-- New East Span** WB Roadway EB Roadway	4	Design	Fall-01	see below Fall-05** Spr-07**	\$ 2,600
-- West Span, Appr. & Yerba Buena Island	8	UC/Design	Spr-94	Sum-09	\$ 700
				Subtotal - SFOBB	\$ 3,300
<u>Other 6 Bridges</u>					
Benicia-Martinez	2	UC	Spr-98	Wnt-02	\$ 190
San Mateo-Hayward*	3	Complete	Sum-97	Spr 00	\$ 190
Richmond-San Rafael	1	UC	Fall-00	Spr-05	\$ 665
Carquinez (Eastbound)	1	UC	Spr-98	Wtr-02	\$ 125
Vincent Thomas	1	Complete	Spr-97	Spr 00	\$ 62
San Diego-Coronado	4	UC	Fall-97	Spr-02	\$ 105
				Subtotal - 6 Bridges	\$ 1,337
				Total Estimated Cost - Seven Bridges	\$ 4,637

* Data does not include landscape mitigation contract.

** East span roadway - dates open to traffic.

NOTES:

UC = Under construction

--- Summer (Sum) = Jul-Sept of the calendar year; Fall = Oct-Dec of the calendar year;

Winter (Wnt) = Jan-Mar of the calendar year; Spring (Spr) = Apr-Jun of the calendar year

Retrofit of the Westbound Carquinez Bridge will be a new bridge constructed from Regional Measure 1.

Toll Bridge Summary

The Department is making significant progress in retrofitting the State's toll bridges. AB 1171 provides the necessary funding for the program, including the MTC-selected new east span.

With the award of the Skyway contract, the total completed and under contract work is \$2.6 billion, or 56 percent of the program dollars. With the exception of the SFOBB demolition contract, the balance of the program dollars will be under contract by the end of calendar year 2002 and five of the seven bridges will be retrofit.

- The SFOBB consists of two major spans, the west and east (discussed above) span. The SFOBB west span currently has a total of eight contracts. Four contracts are completed; three are under construction, and one is in design. The west span retrofit should be completed in the summer of 2009.
- The six non-SFOBB bridges include 12 retrofit contracts. Of the 12 contracts, eight have been completed, and four are under construction. To date, two of the toll bridges have been completed:
 - (1) San Mateo Hayward, completed May 2000.
 - (2) Vincent Thomas, completed May 2000.
- The remaining bridges are under construction and the estimated completion dates are:
 - (3) Richmond-San Rafael, completion Spring 2005
 - (4) Benicia-Martinez, completion Winter 2002
 - (5) Eastbound Carquinez, completion Winter 2002. The westbound Carquinez Bridge will be replaced by a new bridge to be funded by Regional Measure 1.
 - (6) San Diego-Coronado, completion Spring 2002